

REMARKS

Status of the Claims

Claims 1-19 and 21-32 are pending. Claims 1, 19, and 32 are amended. Reconsideration of the application based on the remaining claims as amended and the arguments submitted below is respectfully requested.

Issues under 35 U.S.C. § 102

Claims 1, 8, 10-12, 14, 19, 25, 28 and 32 are rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Glimcher, et al., U.S. Patent No. 5,565,502. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested.

Independent Claim 1 has been amended to require curing the bone composite into a solid structure, the bone tissue including an organic matrix and molding of the ground bone tissue into a solid bone composite structure. Independent Claim 32 has been amended to require molding of the ground bone tissue into a bone composite structure and allowing the bone composite to solidify into a solid structure. Independent Claim 19 has been amended to require the ground bone tissue to including an organic matrix and to be in solid bone composite form. These limitations distinguish the present invention from Glimcher, et al. because Glimcher, et al. discloses a method of isolating crystals from an organic matrix constituents and solvents, not of forming solid bone tissue composite structures.

In Glimcher, et al., bone particles are ground and then disaggregated to release single crystals and small aggregates of crystals. The crystals are typically applied to the cement or paste, in combination with a binder, onto the other surfaces by spraying or coating. The Glimcher, et al. reference does not disclose a load bearing solid composite structures, such as the one described in the present invention.

Claims 8, 10-12, 14, all depend from Claim 1. Claims 25 and 28 depend from Claim 19. Accordingly, these claims should be allowable as well.

Claims 1-14, 17, 19-28, and 31 are rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Boyce, et al., U.S. Patent No. 6,294,187. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested. However, in view of the attached Revised Declaration under 37 C.F.R. § 1.131, this rejection is moot.

The attached Revised Declaration establishes the facts demonstrating that Applicant had conception and reduction to practice date of the claimed invention prior to the effective filing date of the Boyce, et al. patent. Namely, the declaration shows the Applicant had a solid bone composite structure sample comprised of ground bone tissue, wherein the ground bone tissue includes an organic matrix and is substantially cortical bone tissue, and a binder selected from cyanoacrylate or fibrin, namely cyanoacrylate. Also, the Applicant produce the solid bone composite structure sample by providing bone tissue, grinding the bone tissue

to 125 to 850 microns in size, molding the ground bone tissue into a bone composite, introducing a cyanoacrylate binder to the bone composite, curing the bone composite into a solid structure, and refining the bone composite into the desired shape. Accordingly, Applicant respectfully requests that this rejection be withdrawn.

Claim Rejections - 35 U.S.C. §103

Claims 15, 16, 18, 29, and 30 are rejected under 35 U.S.C. § 103(a) as being allegedly obvious over the Boyce, et al. patent. This rejection is respectfully traversed. Reconsideration and withdrawal thereof are requested. However, in view of the attached Revised Declaration under 37 C.F.R. § 1.111, discussed above, this rejection is believed to be moot.

Accordingly, Applicant respectfully requests that this rejection be withdrawn.

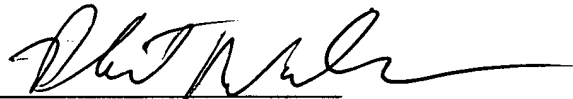
Applicant has commented on some of the distinctions between the cited references and the claims to facilitate a better understanding of the present invention. This discussion is not exhaustive of the facets of the invention, and Applicant hereby reserves the right to present additional distinctions as appropriate. Furthermore, while these remarks may employ shortened, more specific, or variant descriptions of some of the claim language, Applicant respectfully notes that these remarks are not to be used to create implied

limitations in the claims and only the actual wording of the claims should be considered against these references.

Attached hereto is a marked-up version of the changes made to the specification and claims by the current amendment. The attached page is captioned "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

The Commissioner is authorized to charge any deficiency or credit any overpayment associated with the filing of this Amendment and Response to Deposit Account 23-0035.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended). A method of forming a bone composite, comprising:
 - providing bone tissue;
 - grinding said bone tissue to form ground bone tissue including an organic matrix;
 - molding the ground bone tissue into a solid bone composite structure;
 - [optionally] applying a binder to the bone composite; and
 - [optionally milling or refining the bone composite to the desired shape.]
 - curing the bone composite into a solid structure.

19. (Twice amended). [A] An implantable bone tissue composite, comprising:
 - ground bone tissue including an organic matrix and substantially cortical bone tissue, the bone tissue molded to form a desired solid shape [, wherein the bone tissue is substantially cortical bone tissue] and
 - a binder selected from at least one of a cyanoacrylate or fibrin.

32. (Amended). A method of forming an implantable [a] bone composite, comprising:
 - providing bone tissue,
 - grinding said bone tissue to a size of from 125 to 850 microns in size to form ground bone tissue,

molding the ground bone tissue under pressure to form a bone composite [,] structure.

introducing a cyanoacrylate binder to the bone composite[,], and
allowing the bone composite to solidify into a solid structure.




CERTIFICATE OF FIRST CLASS MAILING

I hereby certify that this RCE Transmittal Form, Response and Amendment, Revised Declaration, check for \$370.00 for the RCE fee, and check for \$55.00 for the one month extension are being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231, September 23, 2002.

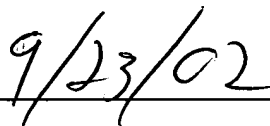
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Date